

Sept. 24. 2007

Dear Members of the Senate Natural Resources Committee and Chairman Mark Miller.

My wife Dela, four children and I make our home near Brodhead, Wis. We operate a vegetable crop and small-scale livestock farm on what was once a dairy farm. We raise more than 100 varieties of vegetables and direct market our crops to 5 communities.

My wife and I are in our 50s. We've never seen the wide swings in temperature and moisture levels, the increased incidence of disease and insects, that we are now experiencing. We believe what we see daily and yearly now in the field is the result of climate change. We've taken steps in the past 2 years to consolidate our vegetable deliveries, to make conservation changes to buildings and to purchase a hybrid SUV – our first new vehicle – to deliver produce with a trailer. We've also had an energy assessment of our property and buildings to determine how we can install solar collectors and generate electricity with wind. We're trying hard to be more conscientious about what we do with fossil fuels. We're studying fuel options with cultivation of sorghum and sunflowers for gasoline and bio-diesel alternatives.

Most of our 130 vegetable customers and many of our value-added product customers believe as we do. We see them in face-to-face transactions. We talk to them at events. We communicate with them by email and newsletter. They are trying to source products close to home. They are trying to help increase food security. Many of them are actively trying to help reduce the effects of global warming.

In part-time and volunteer capacities – both with Churches' Center for Land and People, an ecumenical advocacy program for farming people, and the Green-Rock Audubon Society – I have also been showing an excellent 85-minute film on climate change. This DVD was produced by a Montreal film-maker. It interviews scientists and doctors, biologists and climatologists. It clearly explains the scientific models that support rationales for acting to halt climate change. I have a grant from the national Audubon program to show this film in at least 10 communities in our two counties over the winter. Our local society is recruiting partners in those communities to help show the film to as many people as possible.

I took time from my full-time work today to support SB 81/AB 157, the Wisconsin Safe Climate Act. I understand that it will develop a science-based plan to reduce Wisconsin's global warming emissions to 1990 levels. I want to strongly caution you, however, to put health above wealth in your selection of scientific solutions and basis for curbing climate change.

We all like and need to make money. Yet it is single-minded, money-driven efficiencies that have gotten us into the potentially catastrophic situation that our world faces today. There are many alternatives to fossil fuel consumption, which unfortunately have negative, harmful effects on human health and ecology. Corn-based ethanol production is one of the most highly questionable fuel substitutes in this category. Without its massive federal subsidy, it would not even rank among possible options.

Please consult with experts in all of the sciences – including especially medical and health fields – as you move forward to address climate change. Please act quickly, for we have most certainly less than a decade to bring about substantive change before our Earth approaches a climatic point of no-return.

Respectfully,



Tony and Dela Ends
910 Scotch Hill Road
Brodhead, WI 53520 / 608 897-4288



VOICES

for the Land & People

Alerting, informing & calling to action – people of faith in defense of Creation

Vol.5, No.1

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Spring 2007

What's in future for CCLP?

Projects show promise; support needed in transition

I don't know how the center made it through the winter.

Last year, we had \$24,000 in grant income. This winter, we had \$4,000.

Last year, with grant money, paid and volunteer help, we held more than 20 winter farmers' market benefit sales for farm crisis funding. This year, we sponsored 45 of them in 25 cities with less help and a fraction the resources.

Trying to do so much more on so much less funding has taken a heavy toll. These are harsh and uncertain times for non-profits.

Generosity of scores of people kept us afloat. A dairy farmer I've known and respected for years reminded me of that last week.

Months after I sent out an appeal for help with our projects, I got his reply and a \$100 gift. I saw and thanked him in person at Wisconsin's Future of Farming conference in Madison.

My dairy friend said he lets non-profit requests pile up each year until spring. Some years there's no money to reply. "This year, I looked through the stack," he said, "I decided I'd help you. I respect what you're doing."

The former St. Benedict Center (now Holy Wisdom Monastery) is tearing down the building where we rent office space; we must find a new home base.

Looking ahead to a new fiscal year in July, Churches' Center for Land and People moves forward with hope and vision to meet persistent challenges. Here's a summary:

➤ **New grants** In recent months, I've authored 6 full grant applications, received pledges of \$14,500 from 2 of them, entered a 2nd and 3rd phase of review on 2 more and have begun more inquiries.

➤ **Collaboration** Partners in new grant application projects include two agricultural extension agents, the CSA Learning Center, Iowa Farmers Union, City Colleges of Chicago and Electronic Distance Learning staff.

➤ **Forced move** The former St. Benedict Center (now Holy Wisdom Monastery) is tearing down the building where we rent office space in September, and we must find a new home base.

➤ **Church home?** A state-line church has agreed to undertake an exciting new project with our Center and allow us to relocate offices to their parish hall, pending approval of

- Continued on Page 3

Mark your Calendars

Feb. 1, 2008

**Rural & Urban Life
Gathering 2008**

**Watch Voices newsletters
for details later this year**

**Why everyone should
care about outcome
of 2007 Farm Bill
and speak up in June**

Moonlight bathes our little pencil of country road set down upon this manuscript of land we call home.

I stand in a spring wind that's heaving and sighing across all that's been written upon Scotch Hill Road. I travel along the pavement with my eyes, past barren fields, the Amish country bakery, one of the last clusters of trees here, and Spring Valley Township's cemetery on the hill a mile from our farm.

I think of the 1,000s of roads spanning this great, vast countryside, 100s of thousands of miles of roads, all joining one to other, on and on, and finally connecting to our little rural byway.

Over into Iowa, down across Illinois, up into Wisconsin, upon this fertile soil that has fed generations for many centuries.

Millions of frame farmhouses, like this farmhouse, where Dela and I've

- Continued, next page

New Farm Bill will shape U.S. and world

Continued from Page 1

raised 4 children since we stopped - *our* wanderings 14 years ago. Many of those structures burned or bulldozed along with outbuildings into craters following each exodus of broken people from this land.

I try to recall what it was like when my daddy drove me down these roads 50 years ago. What God wrote here has been transformed so many times, with so many public policies, programs and laws.

North and south our road runs, a little more than a mile long. Horses pulling Amish carriages still echo through Spring Valley. Mechanized farm equipment as big as our house moves up and down this road, too.

Almost treeless now, all life along our road has made way for Loan Deficiency payments, commodity payments, price supports and now federal ethanol subsidies 8 and 9 times greater than for gasoline.

Each federal program and public policy has deformed our countryside in some way. Successive generations of farmers have tilled or no-tilled; planted or held off planting, adopted or discarded farming practices. Almost always, what was done chased subsidies that keep from collapse what we call agriculture.

Each policy and response has reshaped our landscape. Each re-directed and rewrote the meaning of life here for microscopic soil life, seed and plant, animal and bird; man, woman and child. Whether you live in a city or a rural area, whether you farm or not, these policies and responses affect your life.

Absolute power - in government or business - corrupts. History has documented this fact in dictatorships,

fascist regimes, robber barony, monopolies since the beginning of recorded time.

Do we believe in democracy, or not? Do we believe in free enterprise and a free-market system, or not? Do we live and die for these principles, yet let our income tax money fund policies that clearly:

- Concentrate money, power and influence in the hands of fewer and fewer people;
- Limit the number of enterprises and stifle both independence and cooperative capacity;
- Dominate all commerce and production with gigantic, fossil fuel dependent industrial operations?

What's at stake? Nothing less than clean water, food security, climate change, biodiversity, health, safety, choice, livelihoods, life itself.

For nearly 2 years, groups and individuals have been asking me what we the people should seek in a new farm bill. For the Earth, for its dwindling resources, for vital water, soil and food, I believe we must:

- Begin over 5 years to shift away from commodity payments, direct and indirect federal subsidies for food and farming that cost us more than \$100 billion per year.
- Develop and implement a sound strategy for moving this nation away from a Trade Tower system of agriculture, a precarious and unstable food vulnerability, and toward a secure food system that does not depend on foreign oil, does not burn up fossil fuel to make fuels from cash grains, does not follow a path of ever larger yields, depressed prices for commodities and ever rising production expenses.
- Invest in local food systems that can sustain themselves, the land and our people, food systems that no

longer enrich few at expense of many.

- Invest in policies and systems that nurture democratic action and free enterprise.
- Publicly finance and support markets based on safety, health, thriving local economies, and secure relationships.
- Turn away from anonymous pooling of commodities across great distances, endless cycles of farm expansion and shakeouts, and bankrupting of farmers, local economies, natural resources.

Each of us must ensure our tax money serves and protects Creation. I've written a list of 6 specific ways government can invest in these changes. I can email or mail this prescription for change to you. Contact me at scotthillfarm@wekz.net or call me at 608 897-4288.

Farm Bill process: Just 1 month to act

After months of speculation about what will happen to U.S. agriculture and food production under new legislation, the House Agriculture Committee got the ball rolling on the 2007 Farm Bill in late May.

Both the Conservation/Credit/ Energy/ Research subcommittee and the Livestock/Dairy/Poultry sub-committee were set to "mark up" law for the new farm bill before the Memorial Day recess.

The National Farmers Union reports that subcommittees were writing this farm bill in ways that reflect priorities of their members. They were set to release their "markups" for the bill after the Memorial Day recess, with a goal of finishing subcommittee work by the week of June 4. The timetable for full committee completion remains ambitious, sticking to a deadline of the July 4 recess.

Contact your U.S. Senate and House members. Tell them as a consumer or farmer how you want our nation to protect land and resources, grow and manufacture food that feeds us. Act to frame a new Farm Bill that protects the public's interest.

What's in future for Center for Land & People?

Continued from Page 1

Local foundation support. If funded, this project will link consumers and farmers in artisan fiber and food production in a Renaissance-style guild and outreach ministry.

➤ **New programming** We held two trial brunches of all-local and regional foods this past winter. We plan to include these benefit meals in our winter farmers' markets next year. Nutrition education, cooking demonstrations, music, talks and film will all be part of increased market programming.

Carrying forward the mission of this center for farming people in Iowa, Illinois and Wisconsin these past 4 years has been an honor and a challenge.

We've enjoyed strong support of our board and people of 9 denominations in this tri-state. We're so close to meeting our goal of obtaining project funding to make

the winter farmers' markets self-sufficient. This grant money will help us get the paid staff this project so badly needs.

Until all outstanding grant applications are decided and during our relocation of the center over the next 4 months, we need financial assistance. Until Sept. 1, you can still write, email or call us at our office in the former St. Benedict Center.

Donations can be mailed to Churches' Center for Land and People, 4200 County Hwy M, Middleton, WI 53562. Any ideas you have for helping us continue ecumenical advocacy for farmers Illinois, Iowa and Wisconsin farmers and consumers are most welcome.

Contact us at www.cclpmidwest.org / 608 897-4288 / cclp@tds.net, and keep us in your thoughts and prayers.

What people of faith can do to stop global warming

Climate change and global warming are getting a lot of public attention.

This is a welcome change for everyone who recognizes that time is running out (possibly less than 10 years) for the Earth before it will be too late to do something about these issues.

Yet what can people of faith do to increase public understanding of these compelling issues? What can we do to ensure more people come to reverence Creation and act to protect it?

Two new versions of *The Great Warming* have been developed in response to those questions. You can get either DVD from Churches' Center for Land and People – and each purchase will help us act to stop global warming, too.

New Version – You can purchase a new version of *The Great Warming*, that includes (in

addition to the 85-minute documentary narrated by Alanis Morissette and Keanu Reeves) 70 minutes of never-before-seen stories and extended interviews.

Purchasing this DVD directly from Churches' Center for Land and People brings you a 10 percent discount off the \$29.99 retail prices.

Send a check for \$26 for this film to our center, and a portion from every purchase will help us promote winter farmers' market benefit sales.

An estimated 20 percent of U.S. fossil fuel consumption is attributed to our mass food and farming systems, which greatly distance consumers and producers.

Churches' Center for Land and People's winter farmers markets bring farmers and buyers together in parish halls for

benefit sales greatly cut overall fuel consumption.

Church & Synagogues Version

– You can also purchase the complete version of *The Great Warming*, with 70 minutes of extras, plus a downloadable Sunday School discussion guide and a 60-page sermon preparation guide sourced from the Old and New Testaments.

Purchasing this DVD directly from Churches' Center for Land and People also earns you a 10 percent discount off the \$39.99 retail price.

Send a check for \$35 for this DVD version to our center, and a portion from every purchase will help the winter farmers' market project. Use the enclosed order form and return envelop to make your purchase for individual home or faith community purchase of *The Great Warming*.

Help us change climate change.

This book can help us change the world

It clearly defines why everyone – especially in these uncertain times, especially people of faith – needs to understand the world of farming and food-making.

It gives us facts and details to cut through advertising lies and false impressions. It helps us act in truth and walk in light.

It restores economy and ecology to their roots in ecos – “the world as God’s household in which we live.”

For summer reading, group and family discussion and Christian education sessions next fall, this anthology of 40 essays is a must-read.

- What is the ecological and human cost of a bag of French Fries?
- Why do 3 huge companies want massive river dredging projects to barge and ship soybeans in both Latin America and the United States? Does this concentrated production of a single grain help local farmers in both parts of the world stay competitive?

Every purchase will help fund CCLP projects to increase economic justice, earth stewardship, community and spirituality for farming people and consumers.

- How can we tolerate what the World Bank estimates hunger costs the world - \$16 billion annually, when about \$6.2 billion or less would end world hunger?
- How can America restore its “home view” of the world over its present “hotel view” of the world, and why is this so important?
- What does all this have to do with the Gospel of Luke and many other precepts of the Living Word?

Earth Ministry developed “*Food and Faith: Justice, Joy and Daily Bread*” over 10 years. They then used it with more than 120 congregations (15 denominations) in Washington state, where it has helped many people.

It retails for \$14.95, but you can buy it now from Churches’ Center for Land and People at a 10 percent discount.

Food and Faith comes with a 46-page study guide that includes suggested action steps. It has spawned farmers’ markets in church parking lots, connected local farmers and religious communities and gotten local food in school cafeterias.

It works very well with our *Shared Values* and *Crafting Farmers for People and the Land* DVDs (about 25 minutes in length, each).

To bring about positive, healing change in our food and farming systems will take an informed public. It will take strong, individual and collective grassroots responses.

By promoting the reading, discussion and use of this text, you can help make this possible. You’ll also help fund our work.

Use the enclosed order form to purchase one or more copies of this text. Email or call me with any questions you may have at scotchhillfarm@wekz.net or 608 897-4288 / 831-9319

Tony Ends, Director, CCLP
www.cclpmidwest.org

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Four ways you can help

Just coffee! Stirring DVDs! Great text! Good cause!



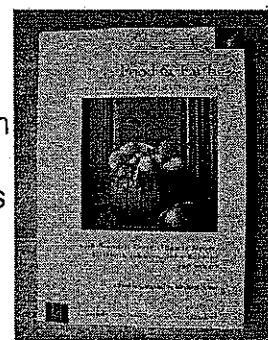
You can now *enjoy* great coffee flavor, *inform* yourself and others through DVDs or interesting reading – **AND** – **help farmers at home and abroad**. Churches' Center for Land & People is a 501 (c)(3) non-profit advocate for Iowa, Illinois and Wisconsin farmers. People of Lutheran, Episcopal, Catholic, United Methodist, United Church of Christ, Presbyterian, Quaker, Mennonite and Unitarian faiths support our work. **We need your help**. Read about our initiatives at www.cclpmidwest.org. Contribute to our work and challenges we all face in *the following four ways*:

- **Stewardship Roast** – We buy quantities of Fair Trade coffee from Chiapas, Mexico. We then sell this coffee in 1 lb. bags of Dark Roast, Light Roast or Decaf as a fund-raiser (\$8.75, *dark & light roast*; \$9, *decaf*). From every bag you purchase, about 25 percent goes to a self-help and farm crisis initiative for U.S. farmers. The balance helps indigenous coffee producers who use shade grown and organic practices and their U.S. roaster and representative – Just Coffee.



- **Food and Faith** – For summer reading, group and family discussion and Christian ed sessions next fall, this anthology of 40 essays is a must read. Earth Ministry developed this text over 10 years and has used it with more than 120 congregations in 15 denominations on the West coast, where it has changed many lives. Great action steps in a thought-provoking study guide. Buy this book now for \$13.50 (a 10 percent discount off the retail price) and help fund CCLP's work.

- **The Great Warming DVDs** – You can buy (a) the *new Standard Version* of this 85-minute documentary film that includes 70 minutes of never-before-seen stories and extended interviews. Alanis Morissette and Keanu Reeves narrate this film produced by Karen Koshof and Stonehaven Productions (available to you for \$26, a 10 percent discount off the retail price). *Or* you can buy (b) the *new Churches and Synagogues version* of this same film, with 70 minutes of extras, plus a downloadable Sunday School discussion guide and 60-page sermon preparation guide sourced from Old and New Testaments (\$35, a 10 percent discount off the retail price).



- **Donation** – Help us cover officer expenses, hire new staff, pay for Voices printing, expand winter farmers market programming. Help bridge our work this summer to new grant projects next winter and transition to our office to a new home base before fall.

Organic Coffee, Great Warming DVDs, Food & Faith, 2007 Donation

Fill out and mail this order form and with a check to Churches' Center for Land and People, 4200 County Hwy M, Middleton, WI 53562. These items *make great gifts! Plan ahead! Donations are tax-deductible!*

Item/Variety	Quantity	Ground <i>OR</i>	Unit price	Discounted Price	Sub Total
	(1 lb bags)	<u>Whole Bean</u>	(\$8.75 each)	(\$8.25 for orders of 6 or more)	
Dark Roast					
Light Roast					
	(1 lb. bags)	Ground/Whole	(\$9.50 each)	(\$9 - orders of 5 lbs. or more)	Sub Total
Decaffeinated					
	Quantity	New DVD - \$26	New Faith DVD - \$35		Sub Total
Great Warming					
Food & Faith				(\$13.50 each, a \$1.45 savings)	
Donation					

(Add \$4 for shipping orders 1 lb. Add 75 cents for shipping each extra pound).

TOTAL _____

Contact Tony Ends, Churches' Center for Land and People, 608 831-9319 or cclp@tds.net. www.cclpmidwest.org

AIA Wisconsin

A Society of The American Institute of Architects



MEMO

DATE: SEPTEMBER 25, 2007

TO: SENATE COMMITTEE ON ENVIRONMENT & NATURAL RESOURCES

FROM: WILLIAM M. BABCOCK, HON. AIA *WMB.*
EXECUTIVE DIRECTOR

RE: SENATE BILL 81 – MANAGEMENT OF GREENHOUSE GASES

For your reference, attached please find the following information from The American Institute of Architects (AIA) related to initiatives to reduce greenhouse gas emissions:

- “Architects and Climate Change”
- “Green Buildings and Sustainable Architecture”

Architects understand that buildings are the biggest single source of emissions and that they can be designed to operate with less than half of the energy consumption of today’s average building at little or no additional cost. The AIA supports initiatives that will:

- Require all government-funded building projects and substantial building renovations to utilize green building standards;
- Provide tax incentives for green building projects undertaken by the private sector that meet certain set standards; and
- Establish GHG emissions reduction targets and outline the energy efficiency measures necessary to meet those targets.

AIA Wisconsin is the state society of The American Institute of Architects, representing architects and allied professionals in private practice, business, industry, government and education.

AIA Sustainable Design Policy Resource Center:
http://www.aia.org/adv_sustainability

321 S. Hamilton Street
Madison, WI 53703-4000
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Fax 608.257.0242
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URL www.aiaaw.org



THE AMERICAN
INSTITUTE
OF ARCHITECTS

Issue Brief

The American Institute of Architects • Government Advocacy • Current Issue Position and Analysis

Green Building Provisions

Key Points:

➤ *Benefits of sustainable architecture include:*

- *Cleaner indoor air quality*
- *Improved occupant health*
- *Increased student/worker productivity*
- *Lower energy costs*
- *Conservation of natural resources, water and energy*
- *Reduced on-site pollution (storm water runoff) and waste (trash)*
- *Reduced air pollution*
- *Less sprawl*

➤ *Currently, over 5% of non-residential building construction are seeking green certification.*

➤ *Green House Gas emissions have increased by 2% per year since 1990 in the building sector, 71% of which comes from the use of electricity.*

➤ *Americans spend 90% of their time indoors. By incorporating green design, indoor air quality can be significantly improved.*

➤ *According to the EPA, building-related illnesses account for \$60 billion in lost productivity each year in the U.S*

Green Buildings and Sustainable Architecture

AIA Position

The American Institute of Architects seeks to dramatically increase the number of high-performance, energy-efficient "green" buildings constructed in both the private and public sectors. Green buildings use resources, such as energy and water more efficiently and have systems in place to take advantage of existing natural resources. To facilitate these goals, below are some resources to help understand the importance of policies promoting energy efficiency and green buildings.

Action Sought

The AIA urges the following actions:

- (1) introduce measures requiring all government-funded building projects and substantial building renovations utilize green building standards;
- (2) provide funding for one or more pilot projects demonstrating the financial feasibility of green building, and utilizing Life Cycle Assessment (LCA) in evaluating the environmental performance of the building(s);
- (3) introduce measures that would provide tax incentives for green building projects undertaken by the private sector, granted that they meet certain set requirements;
- (4) establish GHG emissions reduction targets and outline the energy efficiency measures necessary to meet those targets.

Explanation and Justification

At a time when the United States is trying to reduce its dependence on foreign oil, while at the same time trying to decrease the human impact on the environment, building high-performance, energy-efficient buildings is a universal solution. Building green can:

Reduce Negative Impacts on the Environment: Buildings are the greatest source of emissions and energy consumption in America. They consume between one third and one half of the energy expended in the United States. Buildings use two-thirds of all electricity and produce approximately one-third of carbon dioxide emissions. These numbers are only expected to rise. Architects know that there are technologies and design tools available that can help minimize this pollution.

Raise Indoor Air Quality and Improve the Health and Productivity of Everyone: Although there is widespread knowledge of the dangers of outdoor air pollution, many remain unaware that levels of pollution indoors are often twenty-five times higher, and in some circumstances, more than 100 times higher. These pollutants can cause many ailments ranging from eye and throat irritation to respiratory disease or cancer. 60 million Americans have asthma or allergies which can, in part, be attributed to poor indoor air quality. These conditions account for almost 4,500 deaths and over \$20 billion in lost

For more information contact the State and Local Affairs team at 202-626-7507 or govaffs@aia.org.

Updated: August 2006

Green Building Provisions

Key Points:

- *If 10% of homes in the United States incorporated solar water-heating systems, 8.4 million metric tons of carbon emissions would be avoided each year.*
- *Incorporating water efficiency methods in commercial buildings can reduce water usage by 30% or more and can save thousands of dollars per year.*
- *Studies show that lighting control increases productivity by 7.1%, ventilation control increases it by 1.8% and thermal control increases it by 1.2% - a 1% increase in productivity translates to \$600-\$700 per employee per year.*
- *Studies show that energy efficiency measures are not fully developed in the building sector without government intervention.*
- *295 cities have independently "ratified" CO2 reductions requested in the Kyoto Treaty.*

The American Institute of Architects
1735 New York Avenue, NW
Washington, DC 20006-5292
Phone: 202-626-7505
Fax: 202-626-7583
E-mail: govaffs@aia.org
Website: www.aia.org

productivity, hospitalization and medical services each year. By improving ventilation systems, eliminating the use of interior finishes that release toxins and managing waste, the quality of indoor air will rise. By cleaning this air, we can not only increase worker productivity, but can ensure better health conditions for everyone.

Save Money: Building green can actually save money in the long term. Although the upfront costs associated with incorporating green design may be higher, the overall costs, including maintenance, are much less over the lifetime of the building.

Green technology and design offers comprehensive solutions to many problems. The proper positioning of buildings will not only provide health benefits of natural daylight, but will take advantage of the sun's heat in cooler months and shade in warmer months, thus reducing electric and gas bills. Waste management can decrease landfill usage and reduce toxins in the air. Reusing or recycling construction materials decreases waste and saves money in building costs. We must dispel common myths that building green is more expensive and fruitless. Incorporating sustainable architecture is a win-win solution for all.

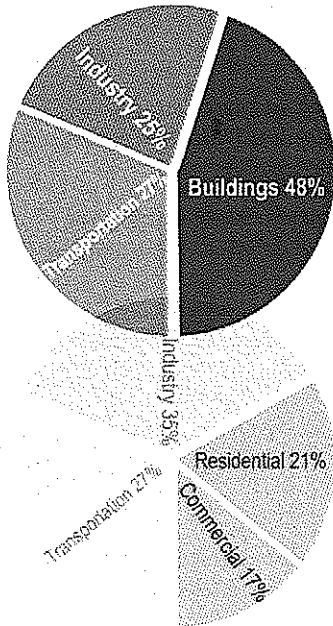
Cities Can Make a Difference: In a Green Guide study, which polled mayors from cities across the nation with a population of 100,000 or more, 29 cities, or 46.8% of the participants, reported having policies in place to encourage green design. In Eugene Oregon, 85% of power is contributed by hydroelectricity and wind and Mayor Calson plans to allot money in 2007 to purchase 25% wind power for all existing general fund buildings. The city of St. Paul in Minnesota has already surpassed its 1997 goal of reducing carbon dioxide emissions and now has a new goal of reaching a 20% reduction of its 1988 CO2 levels by 2020. A first-of-its-kind industrial park is being developed in Huntsville, Alabama, with the hopes of having 100% of all water runoff biofiltered with swales, wet ponds and dry ponds. Rooftop runoff will be separated from parking and street runoff to capture pollutants on site before reaching the subsurface aquifer.

What America Thinks: A recent nationwide poll of voters (1,000 sample, margin of error +/- 3.1%) conducted January 3-5, 2006, by two respected national pollsters — The Tarrance Group, a Republican firm, and Lake Research Partners, a Democratic firm — indicated that the "government should take the lead in promoting real estate development that conserves our natural resources such as oil, gas and electricity."



AIA

Architects and Climate Change

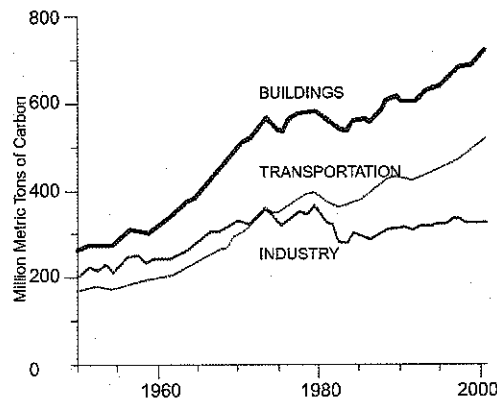


GRAPHIC 1: Combining the annual energy required to operate residential, commercial, and industrial buildings along with the embodied energy of industry-produced building materials like carpet, tile, glass, and concrete exposes buildings as the largest energy consuming and greenhouse gas emitting sector.

Key Points

- ➔ *The biggest source of emissions and energy consumption both in this country and around the globe: buildings.*
- ➔ *The Building Sector, as the major U.S. and global source of demand for energy and materials that produce by-product greenhouse gases, is poised to fuel the world's rush toward climate change.*

Buildings Account For Half Of All Greenhouse Gas Emissions



GRAPHIC 2: U.S. CO2 Emissions by Sector.

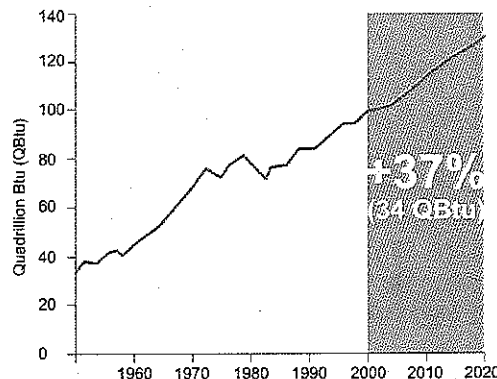
In our quest to dramatically cut greenhouse gas emissions and lessen our dependence on fossil fuels, we have overlooked the biggest source of emissions and energy consumption both in this country and around the globe: buildings and the energy they consume each year. Buildings and their construction account for nearly half of all the greenhouse gas emissions and energy consumed in this country each year. This includes energy used in the production and transportation of materials to building construction sites, as well as the energy used to operate buildings. Globally the percentage is even greater. The Building Sector is the key source of demand for energy and materials that produce by-product greenhouse gases.

U.S. annual energy consumption is projected to increase by 37% (34 quadrillion Btu) and greenhouse gas emissions by 36% over the next twenty years. Annual global energy consumption is projected to increase by 54% (230 quadrillion Btu) over this same period.

Building Sector Emissions Are Increasing Dramatically

Buildings have a lifespan that lasts for 50 to 100 years throughout which they consume energy and produce emissions. The Building Sector as the major U.S. and global greenhouse gas emitting sector, is poised to fuel the world's rush toward climate change. The U.S. alone is projected to need 1,300 to 1,900 new power plants over the next 20 years (about one power plant per week). Most of this new energy will be needed to operate buildings.

The United States will add 22 million buildings that will not only consume electricity produced at a central power plant, but also directly burn oil, natural gas and/or propane in boilers, furnaces and hot water heaters. In fact, 58% of end-use energy needed to operate a building is consumed by the burning of fuel onsite.



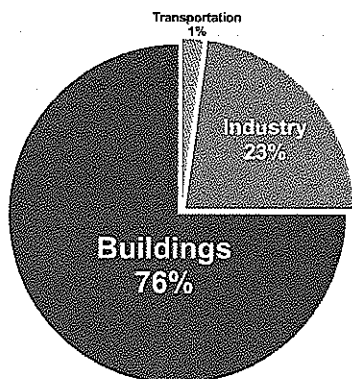
GRAPHIC 3: U.S. Energy Consumption Projections

1 quadrillion Btu is equal to annual energy output of 40 - 1,000MW power plants.



AIA

Architects and Climate Change



GRAPHIC 4: 76% of all power plant generated electricity is used just to operate buildings.

Key Points

- ➔ *Architects know that buildings can be designed to operate with less than half the energy of today's average U.S. building at little or no additional cost*
- ➔ *By the year 2035, three quarters of the built environment in the U.S. will be either new or renovated.*

This Background Sheet was prepared in collaboration with Edward Mazria AIA, founder of Architecture 2030. For further information see www.architecture2030.org or contact: info@architecture2030.org. The AIA, through its Sustainable Design Task Force and its Committee on the Environment, is working to develop a detailed action plan to meet the greenhouse gas reduction goals set-out above.

A Perspective On How To Curb Emissions

Scientists tell us that in order to avoid dangerous climate change we must keep global warming under 2°C above pre-industrial levels (we are currently at 0.7°C above pre-industrial levels). To avoid exceeding this threshold a way forward would involve:

- Promoting sustainable design including resource conservation to achieve a minimum 50 percent reduction from the current level of consumption of fossil fuels used to construct and operate new and renovated buildings by the year 2010.
- Promoting further reductions of fossil fuel consumption by 10 percent or more in each of the following five year intervals so that the cumulative reduction from today's baseline is:

60% in 2010

70% in 2015

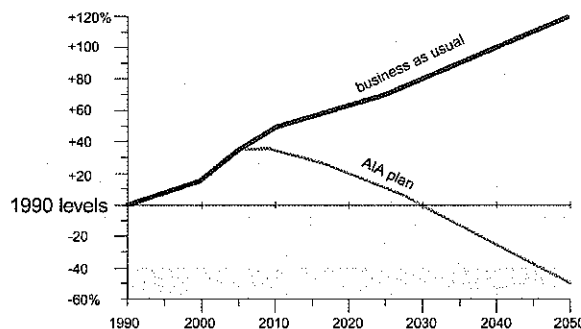
80% in 2020

90% in 2025

carbon-neutral by 2030 (Meaning that the construction and operation of buildings will no longer require the consumption of fossil fuel energy or the emission of greenhouse gases.)

- Driving these reductions through: 1) creating building performance standards in building codes and standards to address private sector structures, and 2) creating governmental mandates that federal and state buildings meet energy efficiency targets.
- Supporting government action to use incentive-based regulatory means to reduce greenhouse gas emissions.

Architects know that buildings can be designed to operate with far less energy than today's average U.S. building at little or no additional cost. This is accomplished through proper siting, building form, glass properties and location, material selection and by incorporating natural heating, cooling and ventilation and day-lighting strategies.



GRAPHIC 5: By enacting a Building Sector initiative like this we can meet a greenhouse gas reduction target of 40% to 60% below 1990 levels by 2050.

With about 5 billion square feet (sf) of new construction, 5 billion sf of renovation and 1.75 billion sf of demolition taking place in the U.S. each year, by the year 2035, three quarters of the built environment in the U.S. will be either new or renovated. This transformation over the next 30 years represents a historic opportunity for the U.S. architecture and building community, with the support of the federal government, to lead in addressing greenhouse gas emission reductions.